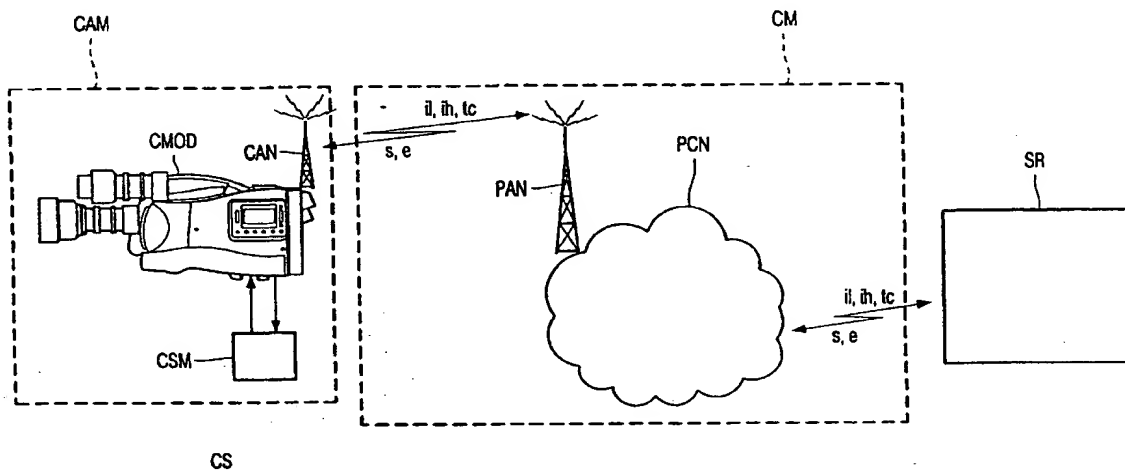




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(54) Title: GATHERING AND EDITING INFORMATION WITH A CAMERA



(57) Abstract

To make recordings made with a (professional) camera more flexible a method and a camera system is proposed whereby the camera at first sends via communication means recorded information with a low resolution to a studio room. The operator in the studio room selects and/or edits what part of the recorded information he wants and requests to send that part of the information with a high resolution to the studio room.

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GATHERING AND EDITING INFORMATION WITH A CAMERA

The invention relates to a method for gathering information with a camera. The invention further relates to a camera system.

A method for gathering information with a camera and a camera system are
5 known in the art and are used to gather information for example news, sport events, etc.

Nowadays a cameraman makes recordings with his camera of the news, the sport event, etc. and when he has finished the recordings he "brings" the recorded information on a tape, a disc or whatever to a studio room. In the studio room an operator selects parts of the recorded
10 information to be used in a news bulletin, a sport bulletin, etc.

Further the use of a satellite during gathering information with a (professional) camera is known whereby beforehand a satellite communication link has to be requested and installed before the cameraman can make the recordings. Via the satellite the information is sent to the studio room where the operator can select the information to be used.
15

The known methods and known camera systems have disadvantages because in case the cameraman makes the recordings and brings the recorded information to the studio room the operator does not know what has been recorded till he receives this information. Further when a satellite link is used the disadvantage is that the cost are high and there is no
20 possibility of recording spontaneously events because the satellite link has to be requested beforehand. A further disadvantage of using the satellite link is that no influence on the received information.

An object of the invention is to overcome the disadvantages of the prior art and
25 to obtain a method and a camera system which are more flexible. To this end a first aspect of the invention provides a method for gathering information as defined in Claim 1.
By using communication means (for example satellite, internet etc.) between the camera and the studio room and by sending the information with a low resolution together with a time code to the studio room it is possible for the operator in the studio room to select with the time

code the part (s) of the recorded information (in the camera) to be sent to the studio room at a higher resolution. That is, that part of the recorded information to be broadcasted. In this way the operator in the studio room is able to select that part of the information he wants to use for a news bulletin, sport bulletin, etc.

5 For example a telephone connection link can be used as communication means.

A second aspect of the invention provides a camera system as defined in Claim 3.

The camera system comprises a camera with storing means. Further in this
10 camera system the recorded information is at first send with a low resolution to the studio room. By storing the information, later on the operator can select, and or edit parts of the recorded information to be sent to the studio room at higher resolution.

Preferably the storing means are random access storing means to obtain a quick access to the stored information.

15 Embodiments of the invention are described in the dependent Claims.

The invention and additional features, which may optimally be used to implement invention to advantage, will be apparent from and elucidated with reference to the examples described below hereinafter and shown in the Figure. Herein shows:

20 The figure schematically an example of a camera system according to the invention.

The figure shows schematically an example of a camera system CS according to the invention. The camera system comprises a camera CAM, communication means CM
25 and a studio room SR.

The camera CAM comprises a camera module CMOD for recording the information. Further the camera comprises storing means CSM for storing the recorded information, for example on random access storing means. The camera further comprises an antenna CAN for sending information il, ih and a time code tc via the communication means
30 CM to the studio room SR.

The information to be sent can for example first be encoded using the MPEG coding.

For example the antenna CAN can be an antenna of a wireless telephone connection.

With the antenna CAN the information il, ih is sent to an antenna PAN of the communication means, which comprises in this example a public wireless telephone network PCN. The public wireless telephone network is coupled to the studio room SR for receiving the information il, ih.

At first the camera sends the information at low resolution il, together with the time code tc to the studio room.

This information at low resolution can for example be at teleconferencing quality. An operator can select what part of the received information he/she wants to use, and/or to edit. The operator sends back via the communication means a signal s (select) and/or a signal e (edit), in these select and/or edit signals the received time code is used to indicate the part of the recorded information. This/these signal(s) are received by the antenna CAN of the camera CAM. After receiving these signals the camera will send the selected and/or edited information at high-resolution ih via the communication means CM to the studio room SR. In this way it is possible to send only that information (at high resolution) to the studio room that is really used in the studio room, which makes it possible to use this method/camera system even if the bitrate of the communication means is not very high.

Using the above described method / camera system it is possible really to determine what information is broadcasted. For example it is possible to send back to the camera and the camera man instructions to repeat some shoots, or even to interview persons for the camera with the questions coming from someone in the studio room.

The studio room can also be a room in a truck for example, with a wireless telephone connection with the camera.

The quality of the real-time information with low resolution mainly depends on the bitrate of the communication means.

The invention has been described on the basis of an example. The man skilled in the art will be well aware of a lot of variations falling within the scope of the invention.

The speed of sending the selected information with a high-resolution ih depends on the highest possible bitrate of the communication means.

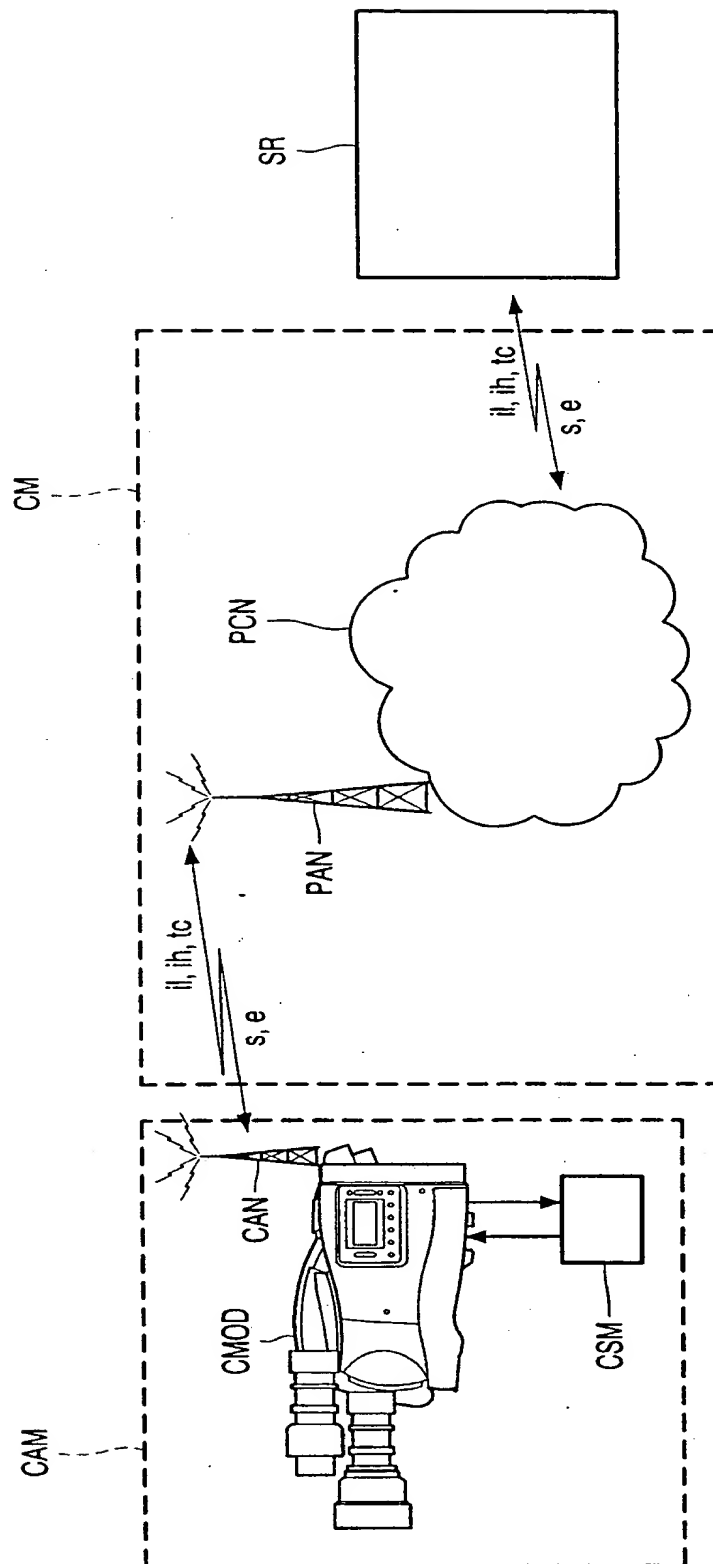
It is to be noticed that the communication means can for example be satellite or internet or any other appropriate communication means.

5 Further instead of sending the information with a time code it is also possible to send the information with so called "meta data" to make for example an edit decision list.

CLAIMS:

1. Method for gathering information comprising the steps of recording information with a camera and storing the information on storing means, sending information with a low resolution together with a time code via communication means to a studio room, selecting in the studio room at least one part of the received information to be handled further,
5 sending back a signal to the camera which part(s) of the recorded information has to be sent to the studio room at high, and sending the part of the recorded information from the camera to the studio room.
2. Method according to Claim 1, characterized in that also an edit signal is sent to
10 the camera for editing the information in the camera.
3. Camera system comprising a camera for recording information and storing the information on storing means, a studio room for receiving the information with a low resolution together with a time code, which studio room is coupled via communication means
15 to the camera, the studio room comprises selecting means for selecting at least one part of the information received to be handled further, means for sending back a signal via the communication means which part(s) of the stored information has to be sent to the studio room at higher, and the camera comprises sending means for sending the selected part of the stored information to the studio room.
20
4. A camera system according to Claim 3, characterized in that the storing means are random access storing means.
5. Camera for use in a camera system according to claim 3.

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INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04N5/222

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 09818 A (STARCAM SYSTEMS INC) 13 March 1997 (1997-03-13) page 16, line 34 -page 18, line 16 page 19, line 13 -page 20, line 34 ---	1,3,5
A	US 5 568 205 A (HURWITZ JAMES) 22 October 1996 (1996-10-22) column 3, line 19 -column 5, line 27 column 5, line 50 -column 9, line 28 ---	1,3,5
A	EP 0 702 832 B (LIGHTWORKS EDITING SYSTEMS LTD) 4 March 1998 (1998-03-04) claim 1 ---	1
A	GB 2 226 218 A (BRITISH BROADCASTING CORP) 20 June 1990 (1990-06-20) ---	
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Date of the actual completion of the international search

22 September 2000

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>FASCIANÓ P: "CAMCUTTER - PICTURES DIRECT FROM LENS TO DISK" IMAGE TECHNOLOGY (JOURNAL OF THE BKSTS),GB,BRITISH KINEMATOGRAPH SOUND AND TELEVISION SOCIETY. LONDON, vol. 78, no. 9, 1 October 1996 (1996-10-01), pages 16-18,20, XP000628350 ISSN: 0950-2114</p>	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/03804

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